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MEETING MINUTES

TO: Distribution **DATE:** February 15, 1995
FROM: Philip A. Nixon **PROJECT:** Solar Ponds Phase I IM/IRA
MEMO #: SP307:020995.02

ATTENDANCE:

DISTRIBUTION:

Briand Wu, DOE
Steve Howard, SAIC/DOE
Andy Ledford, EG&G
Phil Nixon, Parsons ES
John Giammona, Parsons ES
Linda Murray, Parsons ES

M. Matthews, EG&G
(Admin. Record) (2)
B. Cropper
W. Edmonson
J. Hartfelder
H. Heidkamp
P. Holland
D. Kennedy

R. Lux
R. McConn
D. Myers
A. Putinsky
R. Stegen
S. Stenseng
R. Schmiermund
T. Kuykendall
Central Files

SUBJECT: OU4 Risk Assessment Briefing

1) General Presentation of Risk Methodology

Phil Nixon presented the general background and history associated with the development of the OU4 risk methodology. The important points include:

- The OU4 risk methodology was developed at a time when all risk assessment activities at the RFETS were on hold until the DOE, EPA, and CDPHE agreed upon appropriate procedures.
- The OU4 risk methodology was developed and agreed upon by the DOE, EPA, and CDPHE specifically for the OU4 IM/IRA.
- It was agreed by the DOE, EPA, and CDPHE not to re-perform the risk calculations when the sitewide risk methodology was adopted.

2) Detailed Questions and Discussions

It was discussed that a residual risk analysis was being performed to assess the level of risk that will remain from the OU4 soils that are left in place and not consolidated beneath the engineered

cover. It was agreed that this activity was likely to be necessary to provide information to address anticipated public comment. The task should be completed in about 6 weeks which is prior to the receipt of public comments.

Dr. Wu questioned how the risk from leachate migrating from beneath the engineered cover was addressed. Phil Nixon responded that the VS2DT model was being run to assess the concentrations of leachate that were expected to migrate from the closure system. Andy Ledford added that this was not a risk-based calculation because the risk from ground water was a Phase II activity. The Phase I modeling is compliance based in that the modeled leachate concentrations are compared to ground water preliminary remediation goals (PRGs) established at the point of compliance at the toe of the engineered cover.

Dr. Wu discussed that some of the organic PRGs are lower than the contract detection limit. Therefore, it could be impossible to verify via sampling and analysis that remediation to the PRG had been completed. Phil Nixon stated that there would be an attempt to select indicator parameters that could be screened in the field to determine that remediation was complete. Andy Ledford noted that the CDPHE has requested that verification samples be sent to offsite laboratory.

John Giammona stressed the definition of "preliminary" and indicated that use of PRGs should be viewed as screening methodology and they should not necessarily be considered as final cleanup or remediation goals. He stated the PRGs are tools in risk management for the remedial project managers when developing and selecting the ultimate remediation levels (Note these levels may be modified risk-based PRGs, background concentrations, ARARs or other IAG approved concentration limits).

Dr. Wu questioned the use of OU4 aroclor-1254 data based on a "UX" or "undetected-sample matrix interference" laboratory (not validation) qualifiers associated with the first series analyses of several samples. Upon investigating Dr. Wu's concern about the aroclor data, (subsequent to the meeting) it was determined that the data in question were acceptable estimates of aroclor-1254 concentrations in OU4 soils. This data information was provided to Parsons Engineering Science (Parsons ES) via the Rocky Flats Environmental Database System (RFEDS). It is imperative to realize data obtained from this database have been validated by QuantaLex, an independent subcontractor to DOE.

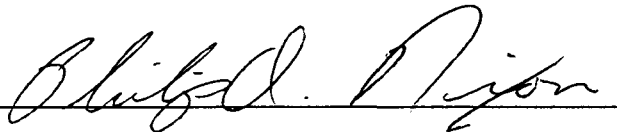
Although Parsons ES conducts its own manipulation of validated data such as evaluating duplicates/replicates, computing summary statistics, etc., data delivered to Parsons ES as valid or more specifically "estimated and acceptable" (i.e., qualified as "JA") are considered to be usable information in determining relevant statistics such as the 95-percent upper confidence limit (UCL). EPA guidance requires the use of estimated data for all risk-related activities. This includes the calculation of the representative contaminant "concentration term" defined as the 95-percent UCL of the arithmetic mean. Note that for instances where data are insufficient to calculate a reliable 95-percent UCL, a maximum should be used (EPA Region VIII, 1994 and

EPA OSWER Directive of 1992). Risk-based preliminary remediation goal concentrations were compared to the 95-percent UCLs and, therefore, justify the use of all estimated and acceptable data in determining OU4 95-percent UCLs.

Dr. Wu's specific concern was that samples SS40033AE and SS40034AE were analyzed twice, with the first laboratory result reported as "UX" and the second analysis as "D" diluted. The validation qualifier is the descriptor risk assessors use as a basis for determining data usability. The validation qualifier for the second diluted analysis was reported as "JA" or "estimated-acceptable" and. On February 16 and 17, 1995, at the request of Parsons ES, QuantaLex personnel re-investigated the OU4 aroclor-1254 samples in question and concluded the following (see attached hard copy results):

"The undiluted PCB sample(s) (first analyses of samples SS40033AE, SS40034, etc., that were qualified as "UX") analyzed for Aroclor-1254 was not used because the column was **saturated** due to high levels of PCBs. The laboratory should have used an "E" or "EX" (versus a "UX") qualifier to indicate **that the instrument range was exceeded** or that the result should not be used due to chemical interference. The diluted sample(s) (second analyses of samples SS40033AE, SS40034, etc.) **indicated clear peaks** associated with Aroclor-1254 (at a concentration range within the calibration range). However, the sample result was qualified as estimated because the laboratory quantified the result using an incorrect number of peaks."

Furthermore, both Parsons ES and QuantaLex data validation chemists and data management personnel believe that aroclor-1254 is commonly found without other PCBs detected. This is generally accepted as the rule, not the exception, and justifies why aroclor-1254 is the only PCB species detected at such large concentrations (1,000 to 12,000 ppb) in OU4 soils. Dr. Wu's suggestion that aroclor-1254 should have been eliminated as an OU4 soil PCOC upon inspection of the data is not applicable in this case for the reasons discussed above.



Philip A. Nixon
Project Manager, Phase I IM/IRA